

ILLINOIS-AMERICAN WATER COMPANY  
RESPONSE TO ILLINOIS COMMERCE COMMISSION  
DATA REQUEST NUMBER WD 1.12

Person Responsible:	<u>Mark L. Johnson</u>
Title:	<u>Vice President Engineering</u>
Phone No.:	<u>618-239-3250</u>
Date Received:	<u>August 14, 2002</u>
Docket No.:	<u>02-0450</u>

WD 1.12. Please provide work papers, memorandums, and/or reports utilized to determine that the PE Method assumes a population of 12 PE per acre.

RESPONSE Attached is the work paper describing the PE methodology for this project.

OFFICIAL FILE  
ILL. C. C. DOCKET NO. 02-0450  
IAWC Exhibit No. 6  
Date 9/25/02 Reporter aal

Mitchell Public Water District  
Third Connection  
Alternative Refund Methodology  
Population Equivalent Method

**Background**

The proposed Third Connection from Illinois-American Water Company (IL-AWC) to the Mitchell Public Water District (MPWD) involves the construction of approximately 10,900 feet ( 2.1 miles) of 16" ductile iron water main along Route 111 from Pontoon Road north to Chain of Rocks Road. Please refer to Figure 1.

The area immediately to the west of the proposed pipeline is the service area of the Village of Pontoon Beach. Pontoon Beach is a sale-for-resale customer of IL-AWC with two existing connections. It is possible that a small portion of this territory marked as Area I (122 acres) could be served in the future by the new connection to the MPWD.

Area II (2093 acres) is located immediately to the east of the proposed pipeline and IL-AWC is currently certificated to serve this area. Area II is currently farmland but has great potential for development.

The MPWD is concerned that the current method (Servable Front Footage Method) for calculating refunds from future developers connecting to this water main is not appropriate. There is a possibility that developers could minimize front footage through creative subdivision and MPWD would not be able to fairly recoup its investment, which could be close to \$1 million.

**Population Equivalent Method**

The Population Equivalent Method (PE Method) would be more appropriate for this project. The PE Method assumes as a minimum that the total area that can be readily served by this water main will be ultimately saturated with residential development. The total area readily servable from this main in Areas I & II is 2,215 acres. Assuming four (4) residences per acre and three (3) people per residence, yields a population equivalent of 12 PE per acre. Also, 1 PE is equal to 55 gallons per day (gpd) (or 165 gpd per household). Therefore, one acre is

equivalent to 660 gpd. The Total PE for this project are:

$$2,215 \text{ acres} \times 12 \text{ PE/acre} = 26,580 \text{ PE}$$

Refunds are calculated by taking the PE established by the new development in areas I or II, dividing by the Total PE and multiplying that percentage times the original cost of the project:

$$\text{Refund} = \text{PE Development} / \text{Total PE} \times \text{Total Cost}$$

The following rules apply to the PE Method:

- The minimum land usage for the PE Method is residential---even if another land use utilizes less water consumption.
- If a proposed land use (hotel, car wash, etc.) utilizes more than 12PE/acre (660 gpd/acre) then the PE Development will be adjusted upward accordingly. Usage calculation for non-residential will be made utilizing established fixture count methods for sizing meters. No adjustment will be made to the Total PE.
- If a development is served in Areas I or II from a different water main other than the MPWD Third Connection, refunds are not applicable.
- Fire flows are not considered in the PE calculation.
- The maximum refund allowed is the Total Project Cost.
- The refund period is 10 years after the date the water main is put in service.